

## **ACUCM v7.0 - Administering Cisco Unified Communications Manager**

3 Day Hands-On Lab & Lecture Course

Price: \$2,695.00

Learning Credits: 27

Hitachi HiPass: 3

### **Description**

Administering Cisco Unified Communications Manager (ACUCM) v7.0 provides system administrators and networking professionals with an understanding of the Cisco Unified Communication Manager System from a Level One support perspective. ACUCM teaches the concepts of IP telephony using the Cisco Unified Communication Manager server, including its function, features, and configuration. This is an entry-level course that begins with the basic concepts of IP telephony and very quickly moves the learner forward into an understanding of the Cisco Unified Communication Manager concepts: clustering, route plans, digit manipulation, call admission control, survivability, media resource, and Cisco Unified Communication Manager features, which are all important to supporting IP telephony in the enterprise network.

ACUCM is geared to individuals who will be using Cisco Unified Communication Manager Administration to perform basic administration-level tasks and provide level one support. The course focus is on Cisco Unified Communications Manager version 7.x.

This course includes various lab exercises to apply what was learned in each preceding lesson. We begin the lab with a newly installed publisher and subscriber. The only elements that are preconfigured are two Media Gateway Control Protocol (MGCP) gateways for the headquarters (HQ) and branch (BR), and an intercluster trunk pointing to the neighbor's pod. Therefore, the student will become familiar with all the various concepts through configuration of the elements in the lab environment.

### **Objectives**

- Discuss Cisco Unified Communication Manager and how it is deployed in the IP telephony network
- Use the basic administrative functions to set up the Cisco Unified Communications Manager server, add users, and perform a backup and restore
- Describe the parameters that affect phones and devices in the network, their configuration, and registration
- Develop a basic route plan, explain its purpose, and configure in the IP telephony network
- Explain the use of transformation masks, route filters, DDI, and translation patterns to accomplish specific types of digit manipulation and call routing
- Describe partitions and CSSs and their use, function, and configuration
- Describe CAC and Cisco Unified SRST
- Describe the various media resources as well as their use and configuration in Cisco Unified Communications Administration
- Describe the basic features and services of Cisco Unified Communications Manager and their configuration in Cisco Unified Communications Manager Administration
- Describe the available phone and directory number options, user web pages, and BAT

## Prerequisites

Basic knowledge of IP and networking is suggested, but not required.

## Course Outline

### Module 1 – Introduction to IP Telephony

- Exploring IP Telephony
  - Traditional Voice vs. IP Telephony
  - CUCM Platform Requirements
  - Clustering Overview
  - Intra-Cluster Communications
  - Cisco Unified CM Clusters
  - Clustering Options
- Describing the CUCM Deployment Models
  - Deployment Models
    - Overview
    - Single-site Deployment
    - Centralized Call Processing Deployment
    - Distributed Call Processing Deployment
    - Business Edition
    - Distributed Single Cluster Deployment
    - Hybrid Call Processing Deployment

### Module 2 – Defining the CUCM Basic Configuration

- Logging into Cisco Unified Communication Manager
  - Logging In to CUCM Administration and Serviceability
  - Logging in CUCM OS Administration and Disaster Recovery System
  - Navigation Menu
  - Command Line Interface
- Performing the CUCM Server Configuration
  - Server Configuration - Eliminating Reliance on DNS
  - Configuring Enterprise Parameters
- Describing Multi-Level Administration
  - Step to Configuring Multi-Level Administration
  - Creating End Users
  - Creating Roles
  - Creating User Groups
  - Assigning Users to User Groups
- Configuring the Disaster Recovery System – Backup and Restore Procedures
  - DRS - Backup Procedures
  - DRS - Restore Procedures – Restore Wizard

### Module 3 – Preparing for Phone Registration

- Configuring CUCM System Parameters
  - System Parameters
    - Unified CM Configuration

- Unified CM Group Configuration
- Phone NTP Configuration
- Date/Time Group
- Codecs and Regions
- Location Configuration
- Device Pool Configuration
- DHCP Server Configuration
- Clusterwide Parameters
  - Enterprise Parameters
  - Service Parameters
- Licensing
- Supporting Cisco IP Phones
  - Cisco IP Phone Models
  - CUCM Phone Support
    - SCCP
    - SIP
  - Phone Button Templates
  - Softkey Templates
- Exploring Phone Registration and IP Phone Communications
  - Cisco IP Phone Registration
    - Manual Registration
    - Auto-Registration
  - Phone Configuration
  - CUCM to Cisco IP Phone Communications

#### **Module 4 – Configuring a Basic Route Plan**

- Exploring Gateways
  - Cisco Access Gateways
  - Gateway Protocols
    - SGCP
    - MGCP
    - H.323
  - Core Gateway Requirements
  - Network Modules
- Creating a Route Plan
  - Dial Plan Overview
  - Route Pattern Overview
  - Digit Collection
  - Call Routing
  - Call Routing Configuration

#### **Module 5 - Discovering Route Filters and Digit Manipulation**

- Configuring Route Filters and Translation Patterns
  - The 9.@ Pattern
  - Route Filters
  - Translation Patterns
- Explaining Digit Manipulation

- Discard Digit Instruction
- Transformation Masks
- Route Plan Report

#### **Module 6 - Exploring Class of Control**

- Explaining Class of Control
  - Overview of Class of Control
  - Partitions
  - Calling Search Space
  - PLAR Application
- Configuring Advanced Class of Control Features
  - Call Restriction
    - Class of User
    - Geographic Location
  - Time of Day Routing

#### **Module 7 - Explaining Call Admission Control (CAC) and Survivable Remote Site Telephony (SRST)**

- Understanding Call Admission Control
  - Overview and Need for Call Admission Control
  - Call Admission Control in a Centralized Deployment
  - Deploying Automated Alternate Routing (AAR)
  - Call Admission Control in a Distributed Deployment
  - Bandwidth Considerations in Call Admission Control
- Explaining Survivable Remote Site Telephony (SRST)
  - Overview of SRST
  - SRST Failover
  - SRST Configuration

#### **Module 8 - Understanding Media Resources**

- Explaining Media Resources
  - Overview of Media Resources
  - Conference Bridge
  - Media Termination Point (MTP)
  - Transcoder
  - Music on Hold
  - Annunciator
- Exploring Media Resource Management
  - Overview of Media Resource Group Management
  - Media Resource Management
  - Configuring Media Resource Groups
  - Configuring Media Resource Group Lists

#### **Module 9 - Describing CUCM Features**

- Understanding Basic CUCM Features
  - Call Park
  - Call Pickup
  - Callback
  - Shared Lines with Barge and Privacy

- Exploring Hunt Groups
  - Hunt Group Overview
  - Line Group Configuration
  - Hunt List Configuration
  - Hunt Pilot Configuration
  - Final Forwarding
- Describing Phone Services
  - Cisco IP Phone Services
  - IP Phone Service Configuration

### **Module 10 - Exploring Moves, Adds, Changes and Administration**

- Understanding Phone Moves, Adds and Changes
  - Phone and Directory Number Options
  - Copy with Lines
- Describing User Configuration
  - Adding a User
  - Associate Devices to a User
  - User Group Configuration
  - User Web Pages
- Explaining the Bulk Administration Tool (BAT)
  - Overview of the Bulk Administration Tool (BAT)
  - Bulk Administration Tool (BAT) Procedures
  - Overview of the Auto-Register Phone Tool (formerly TAPS)

### **Lab Outline**

Lab 2-1: Performing General Administration

Lab 2-2: Configuring Cisco Unified Communications Manager 7.0 Basic Settings

Lab 2-3: Backing Up and Restoring Cisco Unified Communications Manager 7.0

Lab 3-1: Configuring Cisco Unified Communications Manager to Support Cisco IP Phones

Lab 4-1: Configuring Basic Dial Plan Elements

Lab 5-1: Configuring Complex Dial Plan Elements

Lab 6-1: Implementing Calling Privileges and Restrictions

Lab 7-1: Configuring SRST

Lab 8-1: Configuring Media Resources

Lab 9-1: Configuring User Features

Lab 9-2: Configuring Hunt Groups and Call Coverage

Lab 10-1: Create/Associate Users

Lab 10-2: Using the Cisco Unified CallManager Bulk Administration Tool